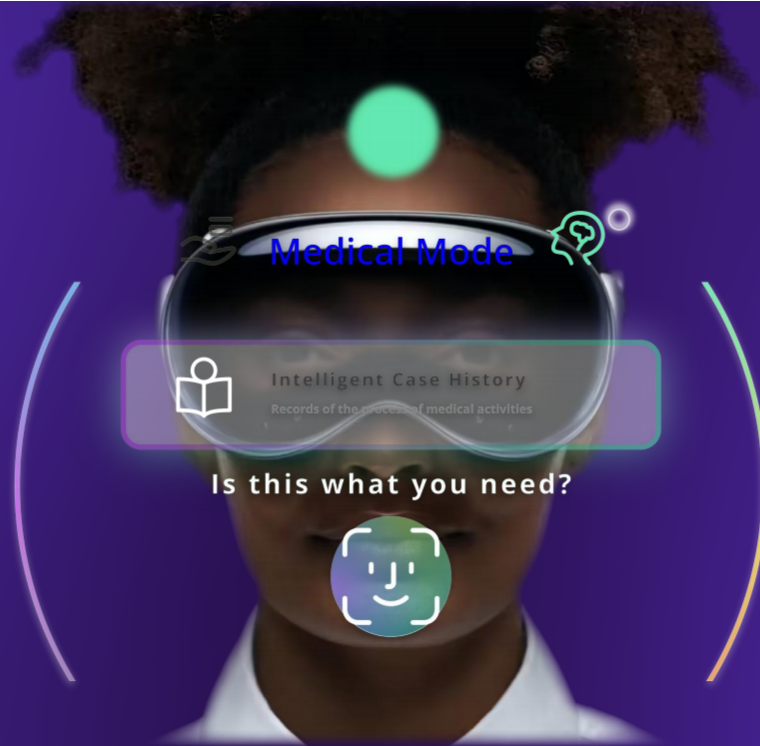




AIACCESS

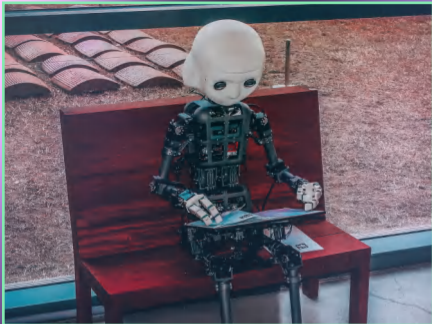
Based on the current plight of digital refugees, combined with the rapid development of AI technology, the project is forward looking, posing a question of how the future "AI refugees" will survive, and proposing a corresponding design solution.



Is this what you need?

Individual Project
2023.6-2023.10

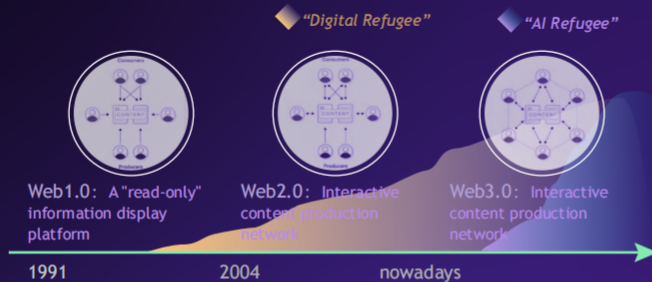
New Business Service
UI/UX Design
AI Future



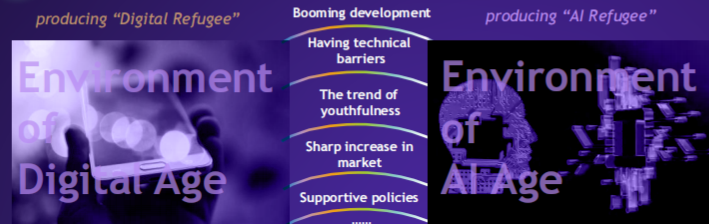
Background

In recent years, the rapid development and popularization of intelligent media technology have promoted the continuous deepening of digitalization in China. The convenience of digital survival has made it an important way for modern people to survive. At the same time, the intensification of aging in China's society has led to the dilemma of digital survival for the elderly population, making vulnerable groups mainly composed of the elderly become "digital refugees" in the information age.

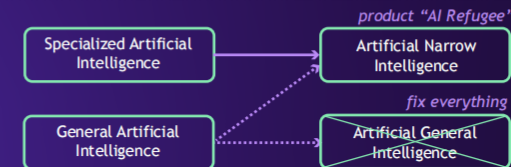
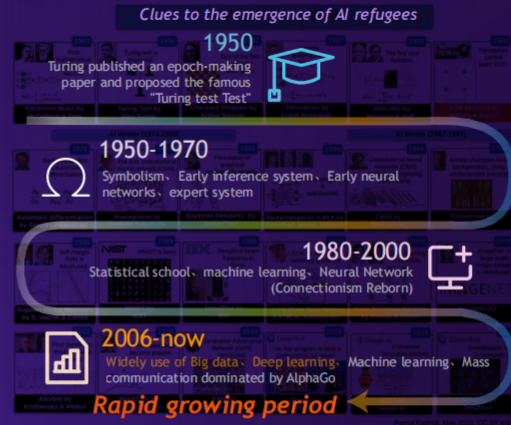
Development Of Digital Technology



Analogy

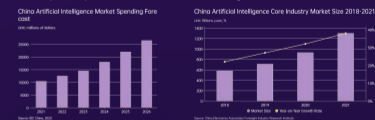


Defination

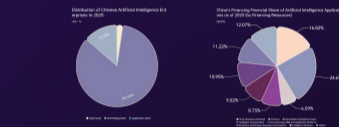


Data

IDC predicts that the Chinese AI market will achieve a market size of **\$26.44 billion** in 2026, and a compound growth rate (CAGR) of over 20% for the five years 2021-2026.



The layout of Chinese AI enterprises focuses on the **application** level and **technology** level. The proportion of AI enterprises in the application level is the highest, reaching **84.05%**. The high proportion of application level enterprises indicates that the development of China's AI technology industry is mainly driven by application demand.



From the perspective of application fields, **smart commerce** and **retail** are the most popular fields in China, with **16.82%** of the financing amount flowing into this field. Secondly, there are fields such as technology finance, new media and digital content, and smart transportation. Overall, the AI market has an unlimited future, and commercial AI that can truly adapt to the needs of most users will see good market development.

Technical Research

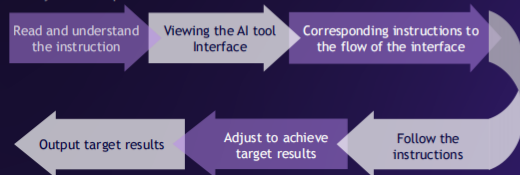
Artificial General Intelligence (AGI) can think about different levels of problems like humans and understand complex concepts. So exploring how to help vulnerable groups use Artificial Narrow Intelligence (ANI) as conveniently as using AGI is the purpose of this project.



Currently, the most common processes that people use ANI can be summarized as follows:

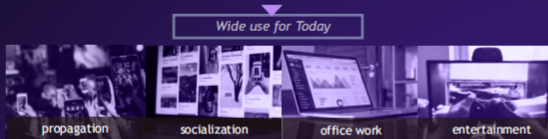
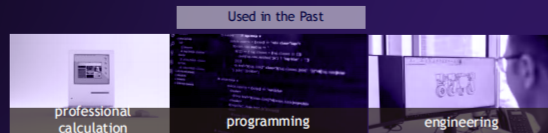


In several stages where problems often arise, people's usage processes can usually be decomposed into:



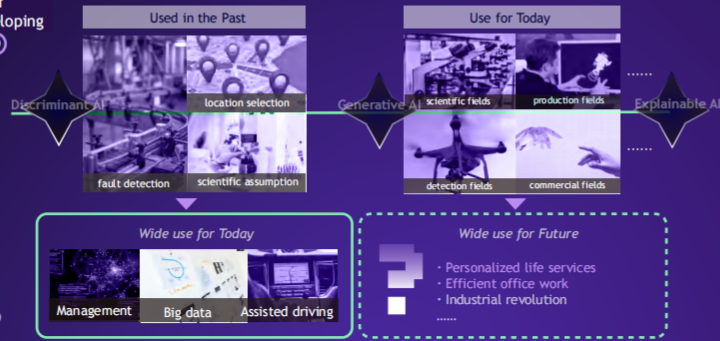
Process Of Digitalization

regularization
quantitative growth



Process Of AI Developing

regularization
quantitative growth



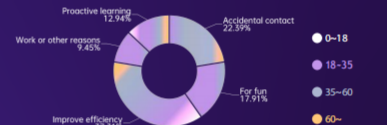
User Research

Questionnaire

Age ratio of respondents



What might be the purpose of your exposure to AI tools?



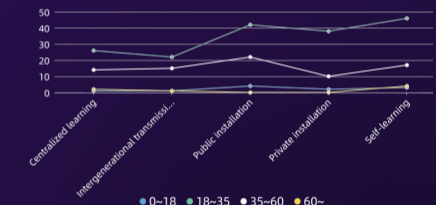
What difficulties have you encountered in accessing or using AI tools?



Scene Setting



Imagine decades of your life have passed and you have become an old man in the physical sense. Your ability to learn and live has gradually declined, what ways would you prefer to catch up with the times?



Conclusion

People are most inclined to use AI to improve their efficiency and have the most difficulty getting the latest version and adjusting results. People tend to learn AI through public installations or self-help in their old age.

Service Walkthrough

During the research process, I chose to use Midjourney, which is currently not commonly accessed by ordinary people but is likely to develop into a common tool in the future, as an example to sort out the process of using AI service.

Jumping to a new page and wondering what to do next



2

Download Google Chrome



Look up information in regular browser



Register and create a server



Open the Midjourney website



Search for direction again



Search in Google Chrome



Read and try out for many times



Ongoing correspondence instructions and interfaces



4



Continuous adjustment of keywords to bring output closer to expectations

8

7

Final Output

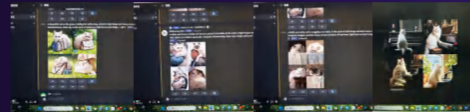


6

5

Interview

- Unfamiliar interface and language
- Complex functionality and too many interface options to find what I want
- Each step requires a search for instruction
- Instructions are difficult to read for first time users
- Hard to translate ideas into effective AI instructions
- Too much time spent exploring features and waiting for responses
- It often takes several adjustments to achieve barely
- The output is highly randomized and imprecise



Persona



Grandma Lin

Age:65
Education: High School

Needs

I want to be able to complete my daily needs independently, such as shopping, accessing money, going to the hospital, etc.

Pains

I lack accesses to learning as well as guidance that suits me, and little attention was paid to my difficulty in special period, the past COVID-19 Period for example.

Hobbies



Mr. Zhu

Age:25
Education: Junior High School

Needs

I'd like to engage in more social and entertainment activities through AI. Also, I have to be able to use some basic AI tools to get a job to make ends meet in the age of AI.

Pains

I stopped going to school a long time ago, so I lack both some general scientific knowledge and patience for learning.

Hobbies



Card Sorting



Opportunities

Logic

Logical frameworks of using process

Knowledge

Indispensable related knowledge

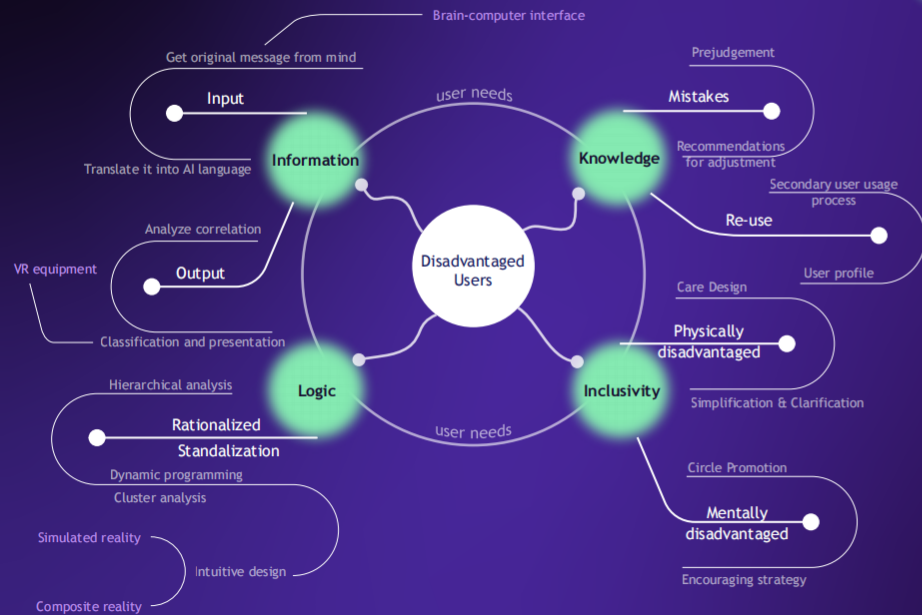
How to pass the knowledge to users in an effective and reasonable way

Information

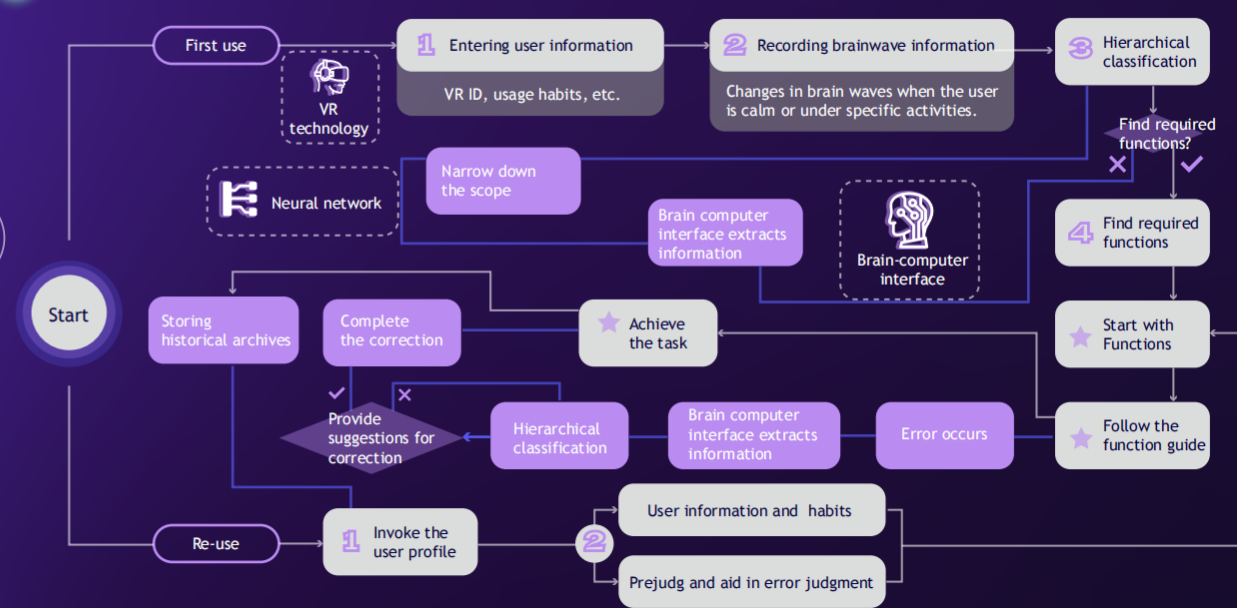
How to make it as fair as possible

Inclusivity

Mind Map



User Flow



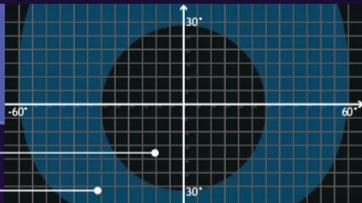
Interface

Important interface elements that need to be frequently viewed and operated by the user need to be placed in the **circular area** as shown in the graph below, while less important information elements can be placed in the **120-degree area**, which can be accessed by the user with a slight turn of the head. In addition, the focus of normal human eyes is not on the horizontal line, but between **6 degrees and 15 degrees** below the horizontal line.



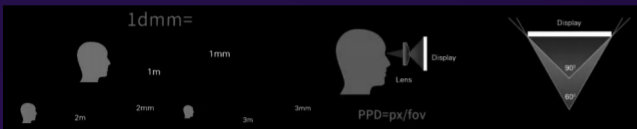
Comfortable viewing area

Secondary viewing area



Google's Daydream team has defined a new unit for existing designs specifically for VR—dmm(distance-Independent millimeter), through which us designers can use graphic software to make a design, we don't need to consider the variable factor of object distance at all.

PPD, Pixels Per Degree, refers to the number of pixels per degree, $PPD = px / fov$ in the lens viewing system, where fov is the field of view, and a display with a PPD greater than 60 degrees can be called a retina screen (which can be converted from retina PPI).



The VR interface design specifications are affected by the parameters of the device, which leads to the fact that future VR interfaces should have a large difference from the ones used in the design currently. In that case, I developed a series of design specifications based on future instruments.

The parameters of the preset devices

PPD:60 Eye tracker accuracy:0.2°

according to the graphs and formulas, we have:

MTS(the minimum text size): $60 \times 0.23 = 13.8px$

CTS(the most comfortable text size): $60 \times 0.35 = 21px$

EME(eye Movement error)= $PPD \times FOV = (0.2 \times 60)px = 12px$

if $d = xm$ (d =the distance between the user and the interface)

$h(MTS) = 2d \tan(MTSpx/PPD)m$

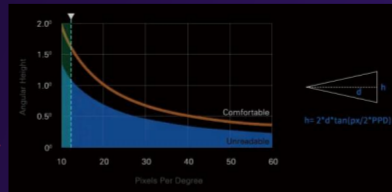
$= 2000 \times \tan(0.115)mm = 6.60xmm$

$h(CTS) = 2d \tan(CTSpx/PPD)m$

$= 2000 \times \tan(0.175)mm = 4.01xmm$

$h(EME) = 2d \tan(EMEp/PPD)m$

$= 2000 \times \tan(0.1)mm = 3.48xmm$



Combined with the concept of dmm, it can be concluded that the smallest text is equal to about **4x dmm**

Similarly, the other design specifications can be developed as follows:

Text size

Headline
Title
Subheading
Body2
Body1
Caption
Button

Regular 12xdmm
Bold 10xdmm
Regular 9xdmm
Bold 8xdmm
Regular 8xdmm
Regular 4xdmm
Regular 6xdmm

Hit size

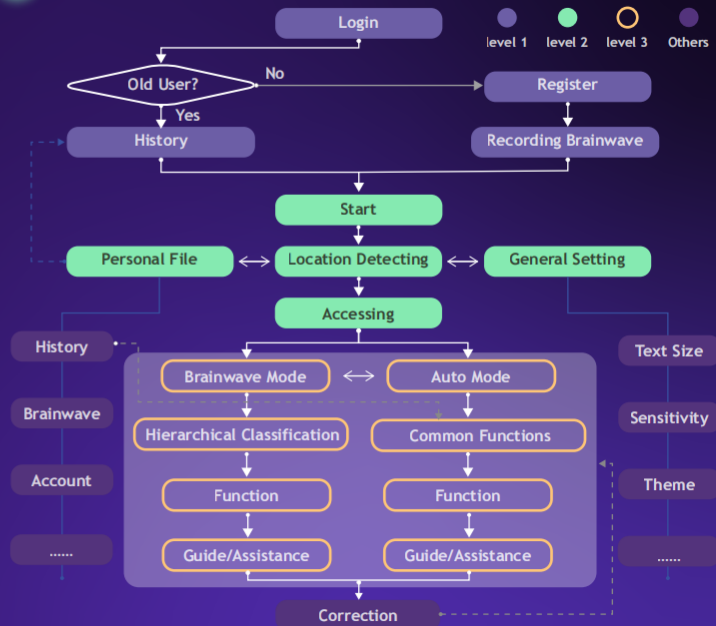


Minimum
20x*20x dmm+3.5xdmm padding



Comfortable
30x*30xdmm+3.5xdmm padding

Information Architecture



Logo



AICCESS

Icon



Color



Usage Scenarios



Medical Mode

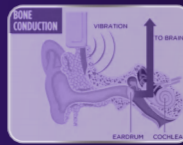
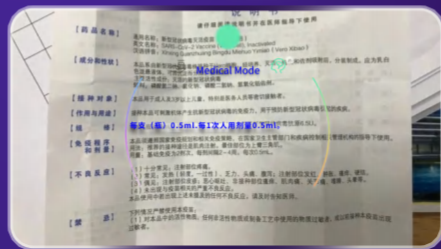
After opening the AICCESS, the corresponding mode is turned on through automatic positioning. Then, AICCESS taps into the local AI system and invokes the user historical records



Users can find the features they want through two ways: **Automatic Mode**, which analyses the features you are most likely to need through data. **Brainwave Mode**, by detecting brainwave summary keywords for hierarchical filtering and find the corresponding function. Users can switch between the two modes at will.

After finding the corresponding function, the system asks and determines through brainwave detection.

In addition, AICCESS provides useful functions such as **command interpretation** and **focus highlighting**.



AICCESS is expected to be carried on lightweight daily items, like general glasses. And for the disabled, like the visually impaired, it also supports the transmission of information through the **bone conduction** mode to improve people's lives.